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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,771	07/06/2001	Ichiro Mase	P/2856-22	7693

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EXAMINER

UHLIR, NIKOLAS J

ART UNIT PAPER NUMBER

1773

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No. 09/900,771	Applicant(s) MASE ET AL.
Examiner Nikolas J. Uhler	Art Unit 1773

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 20 October 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) The period for reply expires 3 months from the mailing date of the final rejection.
- b) The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

- 1. A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
- 2. The proposed amendment(s) will not be entered because:
 - (a) they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) they raise the issue of new matter (see Note below);
 - (c) they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

- 3. Applicant's reply has overcome the following rejection(s): none.
- 4. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
- 5. The a) affidavit, b) exhibit, or c) request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached sheet.
- 6. The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
- 7. For purposes of Appeal, the proposed amendment(s) a) will not be entered or b) will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: none.

Claim(s) objected to: none.

Claim(s) rejected: 1 and 3-20.

Claim(s) withdrawn from consideration: _____

- 8. The drawing correction filed on _____ is a) approved or b) disapproved by the Examiner.
- 9. Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). 09/15/2004.
- 10. Other: _____

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Continuation of box 5(c):

The request for reconsideration has been considered but does not place the application in condition for allowance. Applicants in their response first argue that there is no teaching in the cited prior art to modify the Okamoto reference (which teaches the use of a "several hundred micron" thick film of manganese perovskite oxide as a spacecraft radiator panel), so as to arrive at the instantly claimed invention (which requires a one to thirty micron thick film).

In response, the examiner acknowledges that neither Long nor Okamoto teach the use of a one to thirty micron thick film. However, both Long and Okamoto are directed towards controlling the amount of heat that is radiated/absorbed by the panels of a spacecraft. It is of particular note that Okamoto teaches the use of a manganese perovskite oxide film as a means for passively controlling the amount of heat radiated/absorbed by the surface of a spacecraft. Thus, it is clear that Okamoto teaches the exact same material as utilized by the applicant, and uses it in a similar if not identical manner as the applicant. The only reason Long is included in the rejection of claim 1 is because of applicants requirement of a base which is direct contact with a heat radiation control surface.

Turning now to applicant's assertion that is no motivation in the cited prior art to modify the thickness of the Okamoto several hundred micron thick film so as to arrive at applicants claimed one to thirty micron thick film, the examiner respectfully disagrees. It is once again reiterated that both Okamoto and Long are utilized on *spacecraft*. Weight is well known to be of an utmost concern in spacecraft applications. This is because an

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object to be deployed in space, i.e. a spacecraft or satellite, must first be able to be transported from Earth's atmosphere into orbit. The rockets that are utilized to deliver these objects into orbit have a defined maximum thrust, and so can only carry payloads up to a certain weight. Objects to be carried into space must be below this maximum weight, or hence they cannot be carried into orbit. This payload concept has been known since at least the dawn of the American space program (~circa the late 1950's) if not since the time the first rocket was developed in the early 20th century. Further, Okamoto expressly teaches that the heat radiation film should be formed so that it is lightweight and space saving (column 3, section 14). This is clear evidence that the Okamoto inventors were cognizant of the issue of weight in spacecraft.

In addition, as applicants admitted on the record in their response dated 05/20/2004, "as is well known in the art, there must be sufficient material to conduct heat away from the object and turn this heat into radiation" (response dated 05/20/04, page 7, paragraph 5). By this statement, applicant admits that it is well known in the art that the amount of material utilized in a thin film radiator has an impact on the heat radiation capability thereof.

Now, the examiner acknowledges that Okamoto only teaches a single example utilizing a "several hundred micron thick film." However, the examiner maintains that the teaching of a single thickness does not teach away from other thicknesses that may be suitable. Thus, in light of: 1) the nature of the Okamoto and Long inventions (heat control on spacecraft, where weight is of enormous concern); 2) the fact that Okamoto teaches the exact same material as utilized by the applicant for the exact same

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purpose; and 3) the fact that it is well known in the art that there must be sufficient material to conduct heat away from a substrate and convert it to radiation, the examiner maintains that it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the thickness of the manganese perovskite oxide film utilized by Long as modified by Okamoto so as to achieve a heat control film having a desired balance between weight and thermal conduction/radiation properties. The motivation behind this modification is the optimization of weight and heat transfer properties to suit a specific need (i.e. a specified amount of heat emission/absorption within a defined weight tolerance).

The applicant then argues that even assuming, *arguendo*, that the film of Okamoto is appropriately applied to the surface of the spacecraft of Long, the teaching in Okamoto of the use of a several hundred micron thick film actually shows lack of motivation rather than motivation to reduce the thickness. The applicant bolsters this argument by making essentially the same argument as made above, except that the applicant argues that Okamoto took into consideration the weight limitations of spacecraft applications, and disclosed that a several hundred micron thick film should be utilized. The applicants have a point, but their argument is flawed in one critical way. Applicant's argument presupposes the fact that Okamoto tested the Manganese perovskite oxide film of their invention, and determined that films that were

thinner/thicker than "several hundred microns" were not suitable. However, there is no teaching in Okamoto that films having a thickness other than "several hundred microns" are "bad" or "unsuitable" for use on spacecraft. Okamoto's disclosure that a "several

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hundred micron" thick film is merely an example of a workable thickness, and does not teach away from the use of manganese perovskite films having a thickness other than "several hundred microns."

Applicants then once again assert that the examiner has provided no motivation as found in the prior art to make the proposed modification. The motivation for making the modification was stated in previous office actions (to achieve a heat radiator panel having a balance between weight and heat transfer/radiation properties), and is clarified above.

Applicants request an explanation from the examiner for changing his mind from the previous indication of allowable subject matter (as set forth in the office action dated 12/05/2002). The examiners explanation is as follows. The examiners sole interest in the patent examination process is to ensure that any patents that ultimately are issued from applications examined by him are valid and enforceable. The issuance of an invalid or unenforceable patent creates substantial economic inefficiencies for both the patentee and general public, and may result in the patentee expending large quantities of money trying to enforce patent rights that are not valid. It is the examiners utmost concern in the examination process to avoid these future inefficiencies and legal burdens.

With the above in mind, it most certainly was not the examiners intention to mislead the applicant in the office action dated 12/05/02. In fact, the examiner sincerely believed at that time that once the thickness limitations were entered into claim 1, the application would be allowable. However, the examiner is not estopped from changing

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his mind upon reconsideration of the claims and the prior art. This is exactly what happened in this case. Once the thickness limitations were inserted into the claim, the examiner reconsidered his position in view of the nature of the prior art (spacecraft) and the knowledge in the art of weight concerns in that field. The result of this reconsideration was the 35 U.S.C 103(a) rejection of the instant claims as unpatentable over Long in view of Okamoto.

While the examiner certainly understands that the patent process can be burdensome to an applicant both in terms of time and money, this burden is substantially less than that which will result from enforcement/infringement proceedings. This is especially true if the patent is unable to withstand the substantial scrutiny it will be subject to during a validity proceeding. Given this fact, it is actually beneficial for the applicant to have as many issues argued and overcome on the record during prosecution. This is because presumptive weight is generally given to the examiner findings on the record during prosecution (particularly with respect to the prior art considered by the examiner).

For example, if a patent issued from the instant application as it is currently claimed (without any argument on the record as to thickness), the first thing I would argue if I were an attorney trying to invalidate the patent would be to make the exact same argument as is being maintained by this advisory action. Without a determination on the record by the examiner that the modification of the thickness was unobvious from the prior art, the patent would likely be invalidated under 103(a) for the same reasons as set forth above. Conversely, if there were a determination on the record that this

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thickness is unobvious, the patent would have a much stronger chance of survival, as courts generally give substantial weight to the examiners finding that a prior art reference does not read on the claims. Thus, an argument on the record with respect to the claimed thickness is very important. While the examiner is certain that this is of little consolation to the applicant at this time, ultimately when/if this application issues as a patent, it will be stronger and more enforceable as a result.

The examiner hopes that the above explanation is sufficient, and invites the applicant's representative to contact the examiner should any further explanation be desired.

The rejections contained in the office action dated 08/04/2004 are maintained.

Information Disclosure Statement

The examiner acknowledges receipt of the information disclosure statement (IDS) dated 09/15/2004. The information in the IDS has been completely considered except for the references denoted JP60248499 and JP3-78700. These two references were not considered because an English abstract pertaining to these references could not be located and was not submitted with the IDS.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikolas J. Uhlir whose telephone number is 571-272-1517. The examiner can normally be reached on Mon-Fri 7:30 am - 5 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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D. S. NAKARANI
PRIMARY EXAMINER